CABIG Workflow Draft
(To be continued….)

A. Workflow

A workflow framework enables easy aggregation, integration, linking and customization of the available grid services for the purpose of implementing a business/organizational process or applications.

A workflow:

- Must be flexible enough to allow easy and dynamic discovery, registration, integration and presentation of Grid services on the Grid.
- Must enable Grid service developers to create new services without having to worry about mechanisms for integration into user-facing presentation portals, applications or other Grid services.
- Must enable user-facing Grid portal administrators to integrate new services without requiring them to interact with service developers at the coding level.
- Must enable different Grid portals to interoperate and communicate with each other.
- Must enable different Grid services to interoperate and communicate with each other.

B. Grid Portal, Portlets and Open Standards for Workflow

A Grid portal acts as a framework for integrated delivery of content gathered from an assortment of Grid information sources, applications and services. The primary function of the framework is to provide efficient and flexible engine for assembling a presentation. Given a set of information services or sources, and a recipe on how to arrange and frame them, the portal coordinates the compilation of the final document for presentation.

A portal is responsible for creating, registering, publishing and subscription to each of the grid services. In addition, the containers could provide functions that are common across all grid services such as user-id/password management, user management, authentication, inter-service communication, session management,

A portlet is a server component that controls a small, user configured window in a pane on the user's web browser. A portlet is a portal server component that provides a basic service rendered in a user configurable window in a portal pane as shown above in the figure. Each Grid service is associated with a unique portlet. This is the component based approach to building an integrated information environment or a Grid portal. By supplying the user with a basic pallet of portlets that provide the front-end, interactive part of Grid services and applications, the user can decide how to organize the environment to suit them best.

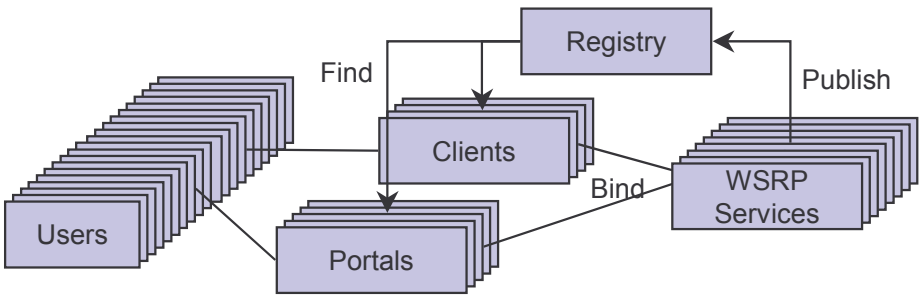

Figure: A Portal using Remote Portlet Web Services

The advantage of this approach is that it provides a natural way to incorporate grid services into the Grid environment. If a Grid service has been designed to be used through an interactive client, that client can be written as a portlet and provided to the user in the Grid portal accessible via the web browser.

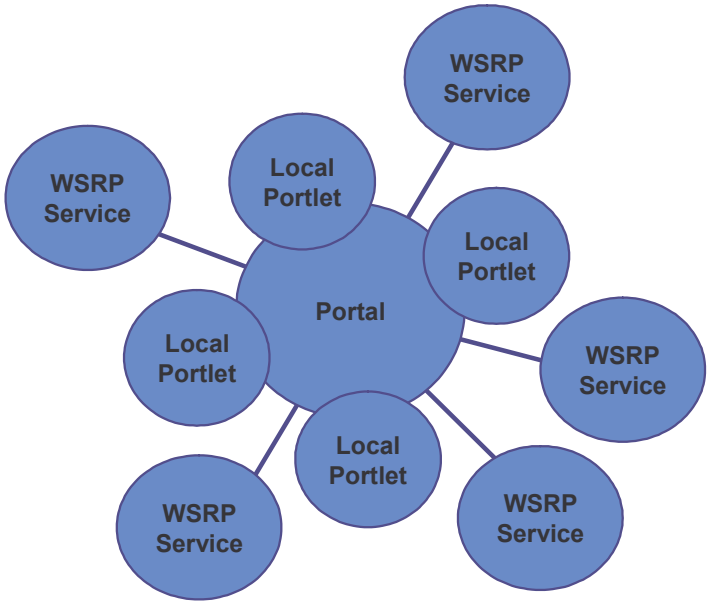

Figure: Local Grid service portlet and Remote webservice portlet

Open Standards

The portlet and the portal model is based on open standards such as JSR-168 [3] and WSRP [4]. The portlet model is supported by IBM, SUN, BEA, Apache and Oracle.

Example Implementations

A set of sample implementations of JSR-168 based portal servers are available, namely uPortal [1] and GridSphere [2].

D. REFERENCES

uPortal Specification, http://www.uportal.org/
GridSphere Specification, http://www.gridsphere.org/
JSR-168 Portlet Specification, http://www.jsp.org/
WSRP (Web Service for Remote Portlets), http://www.oasis-open.org/